

Evolution Notes

Evolution = Change in species over time

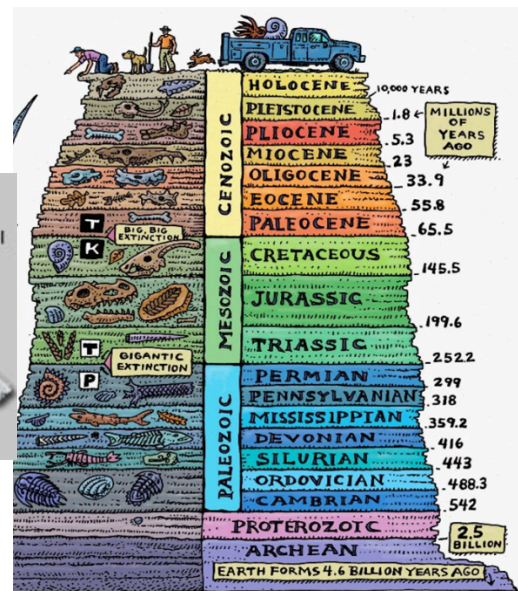
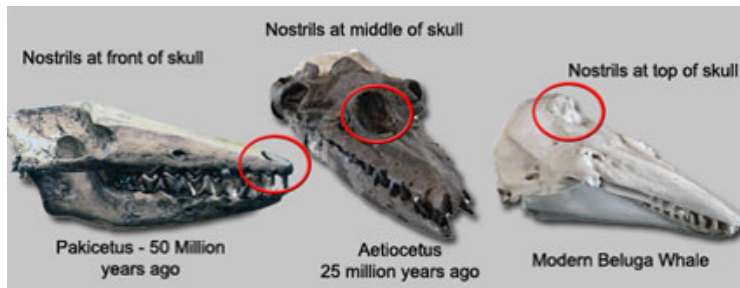
Mechanisms for Evolution:

- Mutation
- Migration
- Genetic Drift (random chance)
- Natural Selection

Evidence for Evolution (FAME):

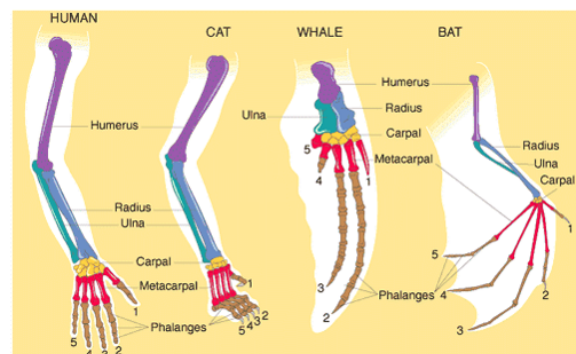
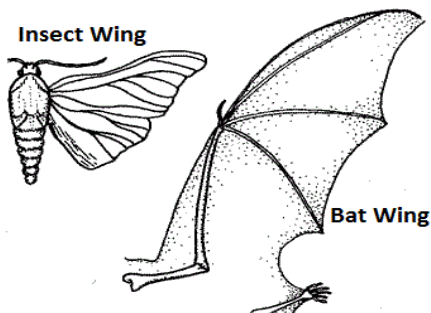
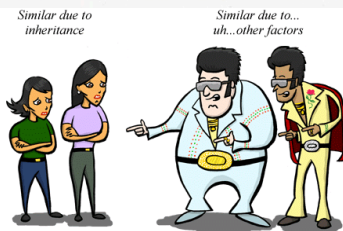
1. Fossils
2. Anatomy
3. Molecules
4. Embryos

1. Fossils: Fossils change a little bit in each rock layer - oldest fossils are deeper.



2. Anatomy: Structures in different organisms are compared to find relationships.

- Homologous Structures = Similar body parts in different organisms
- Analogous Structures = Parts in different organisms that have the same function



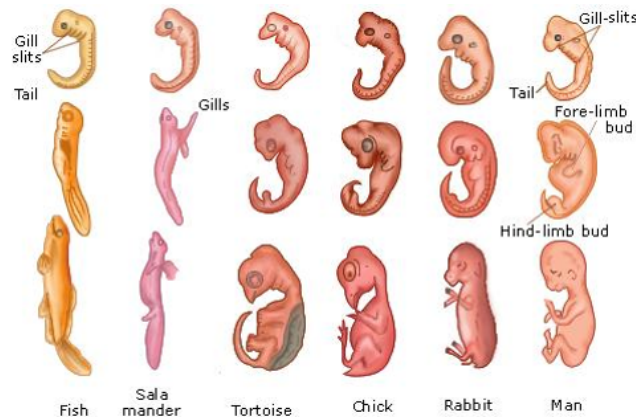
- Vestigial Structures=A part of an organism that has lost its function over time



3. Molecules: Different species have similar DNA.

Species	Sequence of Amino Acids in the Same Part of the Hemoglobin Molecules	Compare	# differences
Human	Lys-Glu-His-Iso	Horse and zebra	1
Horse	Arg-Lys-His-Lys	Horse and gorilla	2
Gorilla	Lys-Glu-His-Lys	Horse and chimpanzee	3
Chimpanzee	Lys-Glu-His-Iso	Human and chimpanzee	0
Zebra	Arg-Lys-His-Arg	Human and gorilla	1

4. Embryos: The embryos of different species have similarities.



Other Observations:

- Galapagos finches,
- [antibiotic-resistant bacteria](#),
- shampoo-resistant lice

Name: _____

Evolution Notes

Date: _____

Evolution = _____

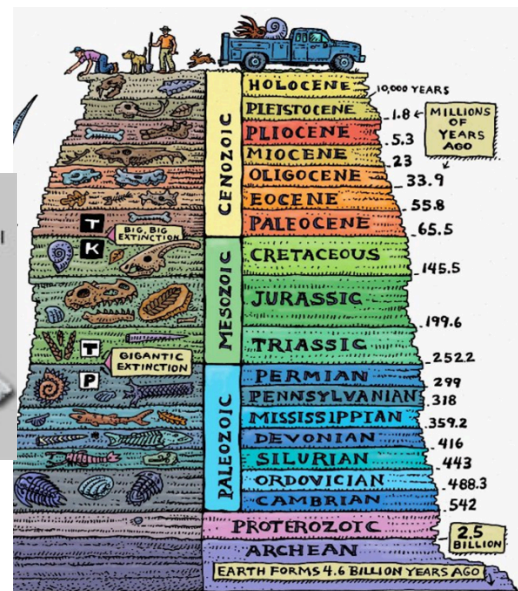
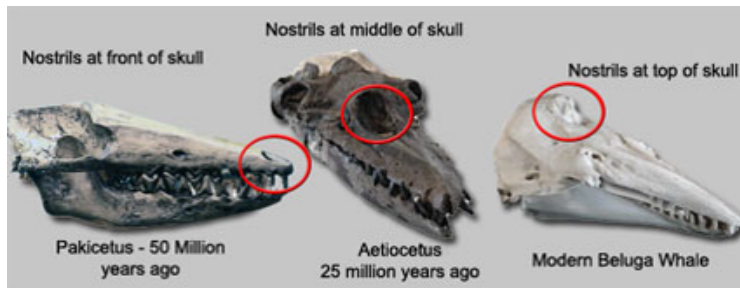
Mechanisms for Evolution:

- _____
- _____
- _____ (random chance)
- _____

Evidence for Evolution (FAME):

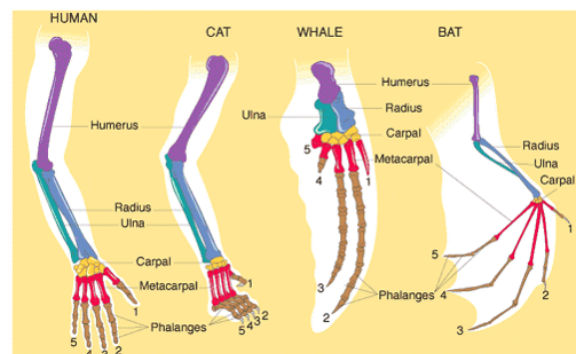
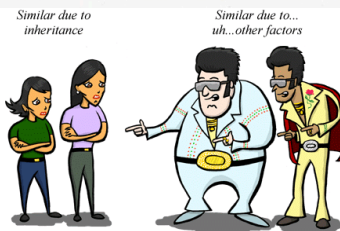
1. F _____
2. A _____
3. M _____
4. E _____

1. Fossils: _____

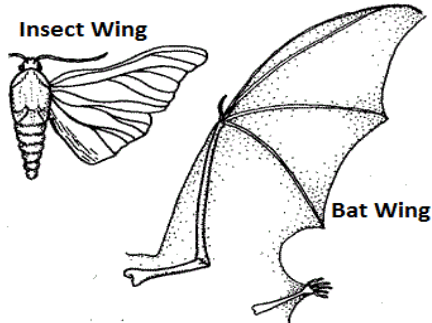


2. Anatomy: _____

- Homologous Structures = _____



- Analogous Structures=



- Vestigial

Structures=



3. Molecules:

Species	Sequence of Amino Acids in the Same Part of the Hemoglobin Molecules	Compare	# differences
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Gorilla	Lys-Glu-His-Lys	Horse and chimpanzee	3
Chimpanzee	Lys-Glu-His-Iso	Human and chimpanzee	0
Zebra	Arg-Lys-His-Arg	Human and gorilla	1

4. Embryos:



Other Observations:

- _____
- _____
- _____

Find the information to fill in these notes in the “Mechanisms for Evolution” and “Evidence for Evolution” pages in the “Micro-Life” Unit page of the class website at stevens.portangelesschools.org/science8